AMENDMENT UNDER 37 C.F.R. § 1.114(c)

U.S. Application No.: 10/069,588

Attorney Docket No.: Q68338

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. (currently amended): A vehicle control method, comprising:

applying a vibration to a tire in a running state to reduce a coefficient of friction in a

longitudinal direction of the tire, between the tire and the surface of a road, and so as to increase

a coefficient of friction in a width direction of the tire between the tire and the road, wherein the

vibration is applied in a revolution direction of the tire,

thereby controlling the running state of the vehicle,

wherein the vibration is a micro-vibration having a higher-frequency than a response

frequency of change in a behavior of the vehicle frequency falling within the range of 20Hz -

1kHz.

2. (canceled).

3. (previously presented): The vehicle control method according to claim 1, wherein in

addition in the revolution direction of the tire, the vibration is also applied in a load support

direction of the tire.

4. (previously presented): The vehicle control method according to claim 1, wherein an

amplitude of the vibration is modulated to a range of 1 to 2,000 % of the depth of a tread of the

tire or the thickness of a top tread of rubber of the tire.

5. (previously presented): The vehicle control method according to claim 1, wherein a

frequency of the vibration is modulated to a range of 1 Hz to 1 kHz.

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6. (previously presented): The vehicle control method according to claim 1, wherein a

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frequency of the vibration is modulated to a range of 20 Hz to 1 kHz.

7. (previously presented): The vehicle control method according to claim 1, wherein at

least one of an amplitude, a frequency and a phase of the vibration to be applied to the tire in the

revolution direction of the tire, is controlled to minimize a rolling resistance of the tire caused by

friction between the tire and the surface of a road at the time of running.

Claims 8-10. (canceled).

11. (previously presented): The vehicle control method according to claim 3, wherein at

least one of an amplitude, a frequency and a phase of the vibration to be applied to the tire in the

revolution direction of the tire, is controlled to minimize a rolling resistance of the tire caused by

friction between the tire and the surface of a road at the time of running.

12. (previously presented): The vehicle control method according to claim 4, wherein at

least one of the amplitude, a frequency and a phase of the vibration to be applied to the tire in the

revolution direction of the tire, is controlled to minimize a rolling resistance of the tire caused by

friction between the tire and the surface of a road at the time of running.

13. (previously presented): The vehicle control method according to claim 5, wherein at

least one of an amplitude, the frequency and a phase of the vibration to be applied to the tire in

the revolution direction of the tire, is controlled to minimize a rolling resistance of the tire caused

by friction between the tire and the surface of a road at the time of running.

14. (previously presented): The vehicle control method according to claim 6, wherein at

least one of an amplitude, the frequency and a phase of the vibration to be applied to the tire in

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the revolution direction of the tire, is controlled to minimize a rolling resistance of the tire caused by friction between the tire and the surface of a road at the time of running.

15. (previously presented): The vehicle control method according to claim 3, wherein at least one of an amplitude, a frequency and a phase of the vibration to be applied to the tire in the load support direction of the tire, is controlled to minimize a rolling resistance of the tire caused by friction between the tire and the surface of a road at the time of running.

16. (previously presented): The vehicle control method according to claim 4, further comprising applying another vibration in a load support direction, wherein at least one of the amplitude, a frequency and a phase of said another vibration to be applied to the tire in the load support direction of the tire, is controlled to minimize a rolling resistance of the tire caused by friction between the tire and the surface of a road at the time of running.

17. (previously presented): The vehicle control method according to claim 5, further comprising applying another vibration in a load support direction, wherein at least one of an amplitude, the frequency and a phase of said another vibration to be applied to the tire in the load support direction of the tire, is controlled to minimize a rolling resistance of the tire caused by friction between the tire and the surface of a road at the time of running.

18. (previously presented): The vehicle control method according to claim 6, further comprising applying a third vibration in a load support direction, wherein at least one of an amplitude, the frequency and a phase of the third vibration to be applied to the tire in the load support direction of the tire, is controlled to minimize a rolling resistance of the tire caused by friction between the tire and the surface of a road at the time of running.

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19. (previously presented): The vehicle control method according to claim 1, wherein the vibration is also applied in the width direction of the tire.

20. (previously presented): The vehicle control method according to claim 19, wherein at least one of an amplitude, a frequency and a phase of the vibration to be applied to the tire in the revolution direction of the tire, is controlled to minimize a rolling resistance of the tire caused by friction between the tire and the surface of a road at the time of running.

21. (previously presented): The vehicle control method according to claim 19, wherein at least one of an amplitude, a frequency and a phase of the vibration to be applied to the tire in the load support direction of the tire, is controlled to minimize a rolling resistance of the tire caused by friction between the tire and the surface of a road at the time of running